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Estadiamento e grau de resiliência do sobrevivente ao câncer de mama

Staging and resilience degree in breast cancer survivors

Estadificación y grado de resiliencia del sobreviviente de cáncer de mama

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The present article was drawn from the research “Resilience as Coping Strategy for Cancer Survivors”, submitted to the Federal University of Pelotas as monographic work to obtain the title of Oncology Specialist from the Multidisciplinary Residency Program in Oncology Healthcare, 2011/12.

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ABSTRACT

Objective: To assess the resilience and staging degree relating to sociodemographic factors of breast cancer survivors followed up in an oncology service. **Method:** Quantitative study with 112 breast cancer survivors. The variables selected were: sociodemographic; clinical staging; survival time; and resilience scale. The analysis was performed using the Epi Info 6.04 software and Fisher's exact test. The research was approved by the Ethics Committee of the Federal University of Pelotas School of Nursing under Opinion N° 31/2009. **Results:** The average age was 46.2 years, there was 60.71% of stage II cases, 81.25% were white, 40.18% had five-to eight-year schooling, 52.68% were married, 73.32% had lived in urban areas, 41.96% exhibited high resilience, and 48.21%

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were followed up from one to three years. **Conclusion:** Staging was not associated with the resilience degree, but rather with age and survival time, confirming the findings of other studies.

Descriptors: Breast Neoplasia, Neoplasia Staging, Psychological Resilience.

RESUMO

Objetivo: Investigar o grau de resiliência e de estadiamento frente aos fatores sociodemográficos dos sobreviventes ao câncer de mama em acompanhamento em um serviço de oncologia. **Método:** Estudo quantitativo com amostra de 112 sobreviventes ao câncer de mama. Foram selecionadas variáveis sociodemográficas, estadiamento clínico, tempo de sobrevida e escala de resiliência. A análise foi realizada utilizando o software Epi Info 6.04 e o teste exato de Fisher. A pesquisa foi aprovada pelo Comitê de Ética da Faculdade de Enfermagem da Universidade Federal de Pelotas sob o Parecer nº 31/2009. **Resultados:** A média de idade foi de 46,2 anos, houve 60,71% de estadiamento II, 81,25% eram brancos, 40,18% tinham escolaridade entre cinco e oito anos, 52,68% eram casados, 73,32% havia vivido em zona urbana, 41,96% apresentou alta resiliência e 48,21% mantinha-se em acompanhamento entre um e três anos. **Conclusão:** O estadiamento não esteve associado ao grau de resiliência, mas sim à idade e tempo de sobrevida, confirmando os achados em outros estudos.

Descritores: Neoplasias da Mama, Estadiamento de Neoplasias, Resiliência Psicológica.

RESUMEN

Objetivo: Investigar el grado de resiliencia y estadificación en relación con factores sociodemográficos de sobrevivientes de cáncer de mama en seguimiento en un servicio de oncología. **Método:** Estudio cuantitativo con 112 sobrevivientes de cáncer de mama. Las variables seleccionadas fueron: sociodemográficas; estadificación clínica; tiempo de sobrevida; y escala de resistencia. El análisis se realizó utilizando el software Epi Info 6.04 y el test exacto de Fisher. La investigación fue aprobada por el Comité de Ética de la Facultad de Enfermería de la Universidad Federal de Pelotas con el Dictamen Nº 31/2009. **Resultados:** La edad promedio fue de 46,2 años, 60,71% estaban en estadio II, 81,25% eran blancos, 40,18% tenían escolaridad entre cinco y ocho años, 52,68% eran casados, 73,32% habían vivido en zonas urbanas, 41,96% tuvieron alta resiliencia y el 48,21% estaban en seguimiento entre uno y tres años. **Conclusión:** La estadificación no estuvo asociada al grado de resiliencia, sino a la edad y tiempo de sobrevida, confirmando los hallazgos de otros estudios.

Descriptores: Neoplasia de Mama, Estadificación de Neoplasias, Resiliencia Psicológica.

INTRODUCTION

Breast cancer is the most common and the second bigger cause of death from cancer among Western women. The average risk of developing the disease among these women is from one to eight, with lower incidence in some other regions of the world and non-Caucasians.¹

Due to its high frequency and, above all, the psychological effects on the perception of sexuality and personal image, breast cancer is probably one of the most feared among women.² Estimates for 2012/2013 were not very encouraging, because there was an estimate of 52,680 new cases in Brazil, which is equivalent to 27.9% of female cancers.³

There has been a small fall in mortality rate in the last 20 years. This scenario may be associated with increased early diagnosis resulting from campaigns that encourage the implementation of screening mammography. This way, when tumors are diagnosed early, they are in the initial stage with small size and and, consequently, better diagnoses are possible.⁴

Staging a case of malignant neoplasia allows assessing the degree of dissemination. Thus, the need of classifying the cases of cancer in stages is based on the ascertainment that the survival rates are unequal when the disease is limited to the organ of origin or when it disseminates into other organs. This way, it is possible to classify the evolution of neoplasias in order to determine the best treatment and patients' survival.⁵

The history of breast cancer indicates that the clinical course of the disease and survival vary from patient to patient. This variation is determined by a complex series of factors, such as the difference in tumor doubling time, metastasization potential, tumor histological type, hormone receptor status, and other mechanisms which have not yet been fully understood and are related to the immune, hormonal, and nutritional condition of the patients.¹

In addition to these factors, the ability to deal positively with adversity to overcome the condition, using adaptive resources to confront the reality, generates the resilience process. This process can make individuals more or less vulnerable to risk and, in addition, determine the way by which they can be resilient in the face of the adversities,⁶ which may or may not be related to survival.

We have observed the absence of studies on resilience associated with clinical staging. This fact adds value to the present study as a contribution to encourage the conduction of further studies. Accordingly, the goal of the present study was to assess resilience and staging degree relating to sociodemographic factors in breast cancer survivors followed up in an oncology service in southern Brazil.

METHOD

The present study was conducted at the Oncology Service of the Federal University of Pelotas Teaching Hospital, Pelotas/RS. This service is considered a reference center for the treatment of cancer in that city and the southern region.

It is a descriptive, cross-sectional study with quantitative approach drawn from the research⁷ "Resilience as Coping Strategy for Cancer Survivors" coordinated by professor Rosani Manfrin Muniz. That research was conducted by the Federal University of Pelotas School of Nursing and approved

by the Ethics Research Committee of the institution under Opinion N° 31/2009 on 17th August 2009.

The instrument used for the collection of data was a structured questionnaire containing 148 predefined questions. Eight questions were prepared using the medical records of the patients and 25 using Wagnild and Young Resilience Scale.⁸

The data relating to the present study were obtained from the database used in the abovementioned research and entered into the Epi info 6.04 software. The analysis was performed using the mentioned software and Fisher's exact test. Of the 264 participants included in that database, we selected 112 patients diagnosed with breast cancer. These patients were 109 women and three men.

The sociodemographic variables selected were: age; sex; race; education; marital status; and place in which they had lived most of their lives – urban or rural area. In addition, other variables were chosen, namely: clinical staging of the disease (according to the patients' medical records and not as recommended by the literature on breast cancer¹); survival time (considered from the end of treatment until the time of the interview, reported by the patients); and the resilience degree (Wagnild and Young Resilience Scale^{8,9,10}).

The present study met the directives of Chapter III of the Ethics Code of Nursing Professionals, based on Resolution 311/2007¹¹ of the Federal Nursing Council (COFEN) related to prohibitions and duties. The study also met Resolution N° 196/9612 of the National Health Council concerning research involving humans.

The participants signed an informed consent form after being informed about the objectives of the research. Participants' anonymity and privacy were assured and they were free to withdraw from the study at any time.

Quality control was performed by means of the following procedures: application of data collection instruments; checking performed by each interviewer at the end of the interviews; review performed by supervisors; replication of the questionnaire in 10% of the participants; and double data typing, followed by comparison of the databases and correction of inconsistencies.

RESULTS

Of the 264 participants included in the abovementioned research, 42.42% (112) had breast cancer diagnosis, 97.30% (109) were women and 2.67% (3) men. Table 1 presents the description of sociodemographic data of the participants with breast cancer. The average age was 46.2 years and the median 55 years (27 to 84 years). The age groups chosen and presented in Table 1 followed the recommendation of the Ministry of Health to conduct screening mammography.

Of the total of patients with breast cancer, 4.46% (5) were aged under 39 years, 56.25% (63) between 40 and 59 years, 36.6% (41) between 60 and 79 years, and 2.68% (3) above 80 years.

With respect to breast cancer staging, the highest incidence occurred in the group aged 50 to 69 years, with 63.39% (71) of cases, with six in stage I, 46 in stage II, 12 in stage III, and seven in stage IV. It is worth noting the presence of a few cases in early stage, with three cases in the group aged up to 49 years, six cases between 50 and 69 years of age, and one in the group of 70 years and over.

There was a predominance of stage II with 60.71% (68) of the participants, followed by stage III with 19.64% (22). Only 8.9% (10) of neoplasias had been diagnosed in stage I and there was no record of *in situ* stage. There were 8.9% (10) of neoplasia in stage IV and 1.8% (2) whose stages were not available in the medical records.

White race was prevalent in the participants, totaling 81.25% (91). Of these, 78.57% (88) were women and 2.67% (3) men. There was 18.75% (21) of non-white patients.

The most frequent education level among the participants was five to eight years of study (40.18%; 45) and 8.03% (9) had 13 years and more. With respect to the percentage relating to the marital status of the population studied, it was found that: 52.68% (59) were married and, of these, 57 were women and two men; 14.28% (16) were single, with 15 women and one man; 14.28% (16) were separated/divorced; and 18.75% (21) were widow/widowed.

The place where the patients had lived most of their lives was predominantly urban, totaling 72.32% (81) in urban areas and 27.67% (31) in rural areas.

Table 1 – Description of patients with breast cancer by sex and staging according to sociodemographic data and location where they lived most of their lives: Oncology Service of the Federal University of Pelotas Teaching Hospital, 2010

Breast cancer	Sex/Staging*									
	Female (n=109)					Male (n=03)				
	I	II	III	IV	N/A	I	II	III	IV	N/A
AGE										
Up to 49 years	03	14	06	02	01					
50 to 69 years	06	44	10	07			01	01		
70 years and over	01	09	05	01						01
RACE										
White	07	56	16	08	01		01	01		01
Non-white	03	11	05	02						
EDUCATION										
Illiterate	01	04	01							
From 1 to 4 years of study	02	17	09	03			01			
From 5 to 8 years of study	04	29	08	04				01		01
From 9 to 12 years of study	03	12	01	01	01					
13 years of study and over		05	02	02						

(To be continued...)

(Continuation)

Breast cancer	Sex/Staging*									
	Female (n=109)					Male (n=03)				
	I	II	III	IV	N/A	I	II	III	IV	N/A
MARITAL STATUS										
Married	06	35	09	06	01		01			01
Single	01	05	07	02					01	
Separated/ Divorced		12	03	01						
Widow/Wido- wer	03	15	02	01						
Place where they lived most of their lives										
Urban area	09	47	14	08	01			01		01
Rural area	01	20	07	02			01			

Source: Research "Resilience as Coping Strategy for Cancer Survivors", 2010.

*Data found in the medical records of the patients; N/A = not available.

Table 2 presents the staging by sex, according to the resilience degree and survival of the participants with breast cancer. With respect to the resilience degree, 8.03% (9) of the interviewees exhibited low resilience, whereas 42.85% (48) exhibited high resilience against the situation experienced.

With respect to the survival time, 48.21% (54) had been followed up from one to three years; they were 52 women and two men. It is worth noting that there were eight women and one man who had been followed up from seven to nine years after completion of treatment. Two women had been followed up for more than 10 years, one in stage II and the other in stage III at the time of diagnosis and initiation of treatment.

Table 2 - Description of patients with breast cancer by sex and staging according to the resilience degree and survival time after completion of treatment, Oncology Service of the Federal University of Pelotas Teaching Hospital, 2010

Breast cancer	Sex/Staging									
	Female (n=109)					Male (n=03)				
	I	II	III	IV	N/A	I	II	III	IV	N/A
RESILIENCE										
Low	01	05	02	01						
Medium	04	35	11	03	01					01
High	05	27	08	06			01	01		
SURVIVAL AFTER TREATMENT										
Less than 1 year	04	06	02	03						
From 1 to 3 years	02	32	11	07			01	01		
From 4 to 6 years	01	26	01							
From 7 to 9 years	03	01	03		01					01
10 years and over		01	01							
N/A		01	03							

Source: Research "Resilience as Coping Strategy for Cancer Survivors", 2010.

N/A = not available.

DISCUSSION

According to world statistics,^{13,4,5,6} breast cancer is rare in men, with a ratio of one man for every 70 to 130 women,

i.e., equivalent to one hundredth of female cases.¹ Therefore, women have a higher risk of developing this neoplasia.

Even in the face of breast cancer being rare in men, the percentage of the male population in the present study was greater than that found in the literature,¹ with 2.67% (3) of the total compared to the number of women.

Associated with sex, another major risk factor for the disease is age.¹⁷ The incidence of breast cancer is uncommon in young women, but it increases during aging.¹⁸

Among the participants, 80.35% (90) belonged to the age group between 40 and 69 years. This is the age group that stands out by the greatest prevalence of the disease and death from breast cancer.¹⁹ It is worth stressing the importance of preventive exams from the fourth decade of life, because, among the participants, the incidence was 50.89% (57) of the disease between the fourth and fifth decades.

The risk of developing breast cancer mentioned by a study was one in 14 women aged between 60 and 79 years, compared to one in 24 women aged between 40 and 59 years, and one in 228 women aged 39 years and below.²⁰ Data from another study²¹ showed incidence of 5.6% of cases with ages of 40 years and below, which is similar to the data of the present study.

In other study,²² the average age among the participants with breast cancer was 56 years, with 21% of malignant pathology corresponding to women under the age of 45 years. However, in our reality, there were few diagnoses in women under the age of 45 years, totaling 8.93% (10) of the participants and, of these, only one was in stage I.

Of the total, three women under the age of 45 years were in stage II and three in stage III, with survival between one and three years after completion of treatment at the time of the interview. According to Fisher's exact test, there was a significant association ($p = 0.009$) between staging and survival time, in which survival ratings (<1 year and 1-3 years) showed a higher frequency of the disease in stage IV.

In another study,²³ the average age was 54 years, but with lower survival rate in women under the age of 30 years (47%). The present study found only one woman under the age of 30 years in stage II and she had been followed up from four to six years. Still, it is important to note that one woman aged 34 years was in stage I at the beginning of treatment and had been followed up from seven to nine years. Therefore, it is important to search for health services when changes in the body are observed and undergo treatment as well as follow-up after the completion of treatment.

In addition, factors that postpone the diagnosis of breast cancer in young women may be associated with the low level of clinical suspicion of the disease, the difficulty experienced during the examination of dense breasts, and lack of screening mammography in this group of patients.²⁴

However, according to a study,²⁵ breast cancer in young women is rarely found by the physician in the clinical examination of asymptomatic patients. This way, in most cases, breast cancer is diagnosed late with possible

unfavorable prognosis. That study found that the greatest incidence during the postoperative period was stage IIA, corresponding to 33.1% of patients, followed by stage IIB, with 21.8%. These results were similar to those found in the present study, in which 60.71% of the patients were in stage II. On the other hand, with respect to the clinical staging obtained from the patients' medical records, it was only described as stage II and stage III, and not as recommended by the literature for breast cancer.^{1,26}

Regarding marital status and education, a study,²⁷ in which 62 patients with breast cancer were interviewed, 79.0% (49), were married and 40.3% (25) had higher education. Different data were found in the present study, in which 52.68% (59) of the patients were married and only 8.03% (9) had higher education.

However, it is assumed that women with higher education level seek health services more frequently. In this way, they are subjected to early clinical breast examination and screening mammography to detect breast cancer in initial stage.²³

According to the same study,²³ the risk of dying among illiterate women was up to seven times greater than among those women who had higher education. This fact, according to the author, may be related to the difficulty in understanding the performance of preventive exams and the difficulty of access to more effective health services for early diagnosis and initiation of treatment.

When it comes to the level of education, in 5.36% (6) of illiterate participants, the survival of two of them was lower than one year, in one participant it was from one to three years, in two participants from four to six years, and one participant could not inform the survival time when interviewed. In 48.21% (54) of the participants, survival was from one to three years. This group consisted of one illiterate, 13 with one to four years of study, 25 with five to eight years, nine with nine to 12 years, and six with 13 years and over.

Regarding survival, a study²³ indicated that women with higher level of education had longer survival (92.2%) during the five years assessed compared with women who had secondary education (84%), elementary education (73.6%), and those who were illiterate (56%).

In view of these results, it can be inferred that, due to low education level, there is no proper observation of the presence of early signs and symptoms, a fact that delays the seek for health services to perform early diagnosis. This way, it is necessary to conduct specific studies to assess this issue.

The Consensus on Breast Cancer Control²⁸ suggests that screening mammography should be performed from the age of 50 years. However the present study found that 23.21% (26) of the cases were diagnosed under this age, and 89.28% (100) of the cases were in stage II or higher at the time of diagnosis.

Regarding race, the present study found a predominance of white population with 81.25% (91) of the participants and, grouping the non-white participants, there was

18.75% (21) of participants. The predominant race found in other studies^{29,30} was also white. According to statistical data³¹ and another study,³² the population of the region served was predominantly white. This finding explains the predominance of this population in the present study. Another study²³ revealed that white patients had longer survival (76.9%) compared with non-white participants grouped (62.2%).

In the present study, survival relating to race was 36.61% (41/91) of the white population with a survival rate between one and three years, followed by 11.61% (13/21) of non-white individuals grouped with equal survival. Despite knowing the factors associated with this neoplasia, about 60% of the cases in Brazil are still diagnosed at advanced stages.³³ This percentage was confirmed by the present study.

Estimates are varied for different stagings and these differences are alarming. In breast cancer patients with stage zero or I, only one in eight dies within ten years, of those diagnosed in stage II a third dies within ten years, and stages III and IV have very dismal prognosis, because very few women with stage IV remain alive after 10 years.³⁴

In the present study, only one woman with stage II and another with stage III at the time of diagnosis were alive and being followed up for more than 10 years. These findings are in line with those found in a study conducted more than 20 years ago.³⁴

With respect to staging, a study³⁵ found that 45.6% of the cases were localized, 19.7% were regional, 10.2% had distance metastasis at the time of diagnosis, and 4.2% had *in situ* tumors. However, that study did not inform about the staging of the disease at diagnosis in 20.3% of cases. The present study showed that only 1.78% (2) of the cases did not have information about staging in the medical records and staging of *in situ* neoplasias was not recorded. This fact can be associated with late search of health services after the appearance of the first symptoms and the difficulties in accessing those services, thus delaying diagnosis and initiation of treatment.

In addition, there are individuals who live in disadvantaged sociocultural environments. Among these, there are individuals who live in rural areas and have difficulties relating to distance and lower availability of access to cancer education programs and general information.³⁶

Since breast cancer is a disease that causes significant morbimortality, late diagnosis lessens the possibility of satisfactory treatment. It should be noted that the rural population experiences difficulties in obtaining the diagnosis; however, on the other hand, they do not exhibit different stages compared with those found in the urban population.³⁷ The present study also found this reality, since the rural population did not exhibit significant differences in staging compared with the urban population.

Still, regarding the ability to cope with the disease process, overcoming barriers, and becoming stronger with respect to the experienced situation, 8.03% (9) exhibited low

resilience and 42.85% (48) exhibited high resilience. On the other hand, there was no significant association between staging and resilience ($p = 0.81$ - Fisher's exact test).

This way, it is worth noting that the degree of staging did not interfere with the way to overcome the difficulties during the follow-up process after the completion of treatment in breast cancer survivors of the present study. There were no significant differences between the resilience degree at different staging degrees.

It is possible to highlight that 91.96% (103) of breast cancer survivors developed ability to respond positively to the adverse situations they faced during the disease process. These survivors exhibited medium (50%) and high resilience (41.96%).

However, some individuals with similar trajectories can differentiate themselves by the fact that some of them can overcome the adversities, whereas other individuals have more difficulties in overcoming these situations and others are not able to face them.³⁸

CONCLUSIONS

The knowledge about the profile of breast cancer survivors can provide them and health managers further information about the disease and its epidemiology. The results of the present study showed small percentage of survivors diagnosed in initial stage. However, in Brazil, with increasingly frequent performance of screening mammography, breast cancer has been diagnosed in earlier stages. Accordingly, survival and the possibility of cure have also increased.

It was also observed that there was a greater incidence of breast cancer between the fourth and fifth decades of life. Therefore, it is important to stimulate men and women to pay attention to any changes in their breasts.

Breast cancer in individuals younger than 40 years is unusual.³⁹ However, after this age, annual clinical breast examination and screening mammography, at least every two years, will contribute to an early diagnosis.⁴⁰

The present study sought results that could indicate an association between clinical staging and resilience capacity in breast cancer survivors. The expectation was to find a lower resiliency degree relating to higher staging degree. However, it was found that this association was not significant and, therefore, this hypothesis was not confirmed.

Based on the findings of the present study, it is worth mentioning the importance of intensifying actions in order to raise awareness about the need of breast cancer detection. This process will lead to diagnosis in earlier stages of this neoplasias, thus enabling a greater survival rate. However, it is known that this survival rate depends largely on the conditions of access to health services, in addition to the quality of care provided to this population after the diagnosis.

Still, there is shortage of studies assessing staging, survival, and the resilience process. This way, these studies

are recommended so that professionals who work in the oncology field can help the population to become stronger to cope with the cancer experience and enhance the possibility of having better quality of life during the survival period.

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